

WHAT IS CLAIMED IS:

1. A high-precision cog system measuring instrument having as its operating axes an X axis, a Y axis, and a Z axis, which are at right angles to each other, the device moving an object to be measured parallel to the X, Y, and Z axes, and in addition, rotating it around the Z axis, while measuring the external shape of the object to be measured, the device comprising:

a main body, comprising a base, secured to an installation face where the high-precision cog system measuring instrument is to be installed; a Y-direction moving table, which is mounted on the base and can move in one horizontal direction; and an X-direction moving table, which supports a measuring element and can move in another horizontal direction at a right angle to the Y-direction moving table;

a body for supporting the object to be measured having a section for supporting the object to be measured, which can move in the Z axial direction and rotate around the Z axis, the object to be measured being supported by the section for supporting the object to be measured, and the measuring element being positioned so as to be able to touch the object to be measured and attain a free angle with respect to the installation face; and

a connecting part, which can secure the body for supporting the object to be measured to the main body in such a manner as to allow them to be finely adjusted.

2. The high-precision cog system measuring instrument as described in Claim 1, the body for supporting the object to be measured comprising a mechanism which rises and descends along the Z axis, and a rotating mechanism which rotates around the Z axis.

3. The high-precision cog system measuring instrument as

described in Claim 20, wherein the body for supporting the object to be measured has an approximately rectangular frame-like shape, the mechanism which rises and descends along the Z axis and the rotating mechanism which rotates around the Z axis being provided on the Z axis, so that the body for supporting the object to be measured is symmetrical in a face formed by the Z axis and another axis at a right angle to the Z axis.

4. The high-precision cog system measuring instrument as described in Claim 1, wherein the load center of the body for supporting the object to be measured touches the installation face.

5. The high-precision cog system measuring instrument as described in Claim 1, wherein the connecting part remains symmetrical to the overall high-precision cog system measuring instrument, while securing the body for supporting the object to be measured near to an attachment position of the object to be measured and near to the measuring element of the main body.